

## CLAIMS

1. An engine control system in a vehicle comprising:  
a variable displacement internal combustion engine;  
a controller for controlling the displacement of said variable  
displacement internal combustion engine;  
5 wherein said controller adaptively determines a torque threshold  
used to switch the variable displacement internal combustion engine between  
a partially displaced operating mode and a fully displaced operating mode.
2. The engine control system of Claim 1 wherein said variable  
displacement internal combustion engine is a gasoline engine.
3. The engine control system of Claim 1 wherein said variable  
displacement internal combustion engine includes at least six cylinders.
4. The engine control system of Claim 1 wherein said variable  
displacement internal combustion engine is an eight-cylinder engine.
5. The engine control system of Claim 1 further comprising a  
brake pedal sensor electronically coupled to said controller.
6. The engine control system of Claim 1 wherein said controller  
adaptively determines a torque threshold used to switch the variable  
displacement internal combustion engine between a partially displaced  
operating mode and a fully displaced operating mode by determining the time  
5 the variable displacement internal combustion engine operates in said  
partially displaced operating mode.

7. A method of controlling the displacement of a variable displacement internal combustion engine comprising the steps of:

measuring a variable indicative of torque for the variable displacement internal combustion engine; and

5 adaptively modifying a torque threshold to vary the displacement of the variable displacement internal combustion engine.

8. The method of Claim 7 wherein the step of adaptively modifying the torque threshold to vary the displacement of the variable displacement internal combustion engine comprises determining the time the variable displacement engine operates in a partially displaced operating mode.

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9. A method of controlling the displacement of a variable displacement internal combustion engine comprising the steps of:

measuring a engine intake manifold vacuum for the variable displacement internal combustion engine; and

5 adaptively modifying a vacuum threshold to vary the displacement of the variable displacement internal combustion engine.

10. The method of Claim 9 wherein the step of adaptively modifying the vacuum threshold to vary the displacement of the variable displacement internal combustion engine is based on the time the variable displacement engine operates in a partially displaced operating mode.